

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1202jxp

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 Jul 12 BEILSTEIN enhanced with new display and select options,
resulting in a closer connection to BABS
NEWS 4 AUG 02 IFIPAT/IFIUDB/IFICDB reloaded with new search and display
fields
NEWS 5 AUG 02 CAPLUS and CA patent records enhanced with European and Japan
Patent Office Classifications
NEWS 6 AUG 02 The Analysis Edition of STN Express with Discover!
(Version 7.01 for Windows) now available
NEWS 7 AUG 27 BIOCOMMERCE: Changes and enhancements to content coverage
NEWS 8 AUG 27 BIOTECHABS/BIOTECHDS: Two new display fields added for legal
status data from INPADOC
NEWS 9 SEP 01 INPADOC: New family current-awareness alert (SDI) available
NEWS 10 SEP 01 New pricing for the Save Answers for SciFinder Wizard within
STN Express with Discover!
NEWS 11 SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
NEWS 12 SEP 14 STN Patent Forum to be held October 13, 2004, in Iselin, NJ
NEWS 13 SEP 27 STANDARDS will no longer be available on STN
NEWS 14 SEP 27 SWETSCAN will no longer be available on STN

NEWS EXPRESS JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 15:00:27 ON 11 OCT 2004

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'CAPLUS' ENTERED AT 15:00:37 ON 11 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 11 Oct 2004 VOL 141 ISS 16
FILE LAST UPDATED: 10 Oct 2004 (20041010/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s remov? (4a) oxygen (5a) synthesis gas
      1116755 REMOV?
      651306 OXYGEN
      6358 OXYGENS
      655739 OXYGEN
            (OXYGEN OR OXYGENS)
      1144312 SYNTHESIS
            3 SYNTHESISES
      62627 SYNTHESSES
      1179764 SYNTHESIS
            (SYNTHESIS OR SYNTHESISES OR SYNTHESSES)
      1382072 GAS
      475804 GASES
      1552732 GAS
            (GAS OR GASES)
      14907 SYNTHESIS GAS
            (SYNTHESIS(W)GAS)
L1      20 REMOV? (4A) OXYGEN (5A) SYNTHESIS GAS
```

```
=> s l1 and fischer tropsch
      21999 FISCHER
      15 FISCHERS
      22011 FISCHER
            (FISCHER OR FISCHERS)
      7127 TROPSCH
      7033 FISCHER TROPSCH
            (FISCHER(W)TROPSCH)
L2      1 L1 AND FISCHER TROPSCH
```

=> d l1 ibib ab

L1 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:633289 CAPLUS
DOCUMENT NUMBER: 139:152079
TITLE: Selective removal of oxygen from syngas in production of liquid hydrocarbons
INVENTOR(S): Wang, Daxiang; Wright, Harold A.; Ortego, Beatrice C.;
Trinh, Sinh H.; Espinoza, Rafael L.
PATENT ASSIGNEE(S): Conoco Inc., USA; Conocophillips Co.
SOURCE: U.S. Pat. Appl. Publ., 27 pp.
CODEN: USXXCO

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003153632	A1	20030814	US 2002-219108	20020815
US 6747066	B2	20040608		
US 2004198845	A1	20041007	US 2004-822528	20040412
PRIORITY APPLN. INFO.:			US 2002-353774P	P 20020131
			US 2002-353822P	P 20020131
			US 2002-219108	A3 20020815

AB The present invention is an improvement in the preparation of liquid hydrocarbons from natural gas/methane, O and/or steam. In particular, the present invention relates to processes for the production of synthesis gas, reducing the O concentration from the synthesis gas, and the production of liquid hydrocarbons using the O reduced synthesis gas as a feedstock. More particularly, the present invention described herein identifies catalyst compns., apparatus and methods of using such catalysts and apparatus for preparing liquid hydrocarbons via

O reduced synthesis gas all in accordance with the present invention.

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 15:00:27 ON 11 OCT 2004)

FILE 'CAPLUS' ENTERED AT 15:00:37 ON 11 OCT 2004

L1 20 S REMOV? (4A) OXYGEN (5A) SYNTHESIS GAS
L2 1 S L1 AND FISCHER TROPSCH

=> s l1 not l2
L3 19 L1 NOT L2

=> s l3 and hydrocarbon synthesis
310822 HYDROCARBON
310348 HYDROCARBONS
478120 HYDROCARBON
(HYDROCARBON OR HYDROCARBONS)
1144312 SYNTHESIS
3 SYNTHESISES
62627 SYNTHESES
1179764 SYNTHESIS
(SYNTHESIS OR SYNTHESISES OR SYNTHESES)
1950 HYDROCARBON SYNTHESIS
(HYDROCARBON(W) SYNTHESIS)
L4 0 L3 AND HYDROCARBON SYNTHESIS

=> s l3 and first synthesis gas
925301 FIRST
57 FIRSTS
925348 FIRST
(FIRST OR FIRSTS)
1144312 SYNTHESIS
3 SYNTHESISES
62627 SYNTHESES
1179764 SYNTHESIS
(SYNTHESIS OR SYNTHESISES OR SYNTHESES)
1382072 GAS

475804 GASES
1552732 GAS
(GAS OR GASES)
8 FIRST SYNTHESIS GAS
(FIRST(W) SYNTHESIS (W) GAS)
L5 0 L3 AND FIRST SYNTHESIS GAS

=> s l3 and hydrocarbon? product?
479998 HYDROCARBON?
2531599 PRODUCT?
2216 HYDROCARBON? PRODUCT?
(HYDROCARBON? (W) PRODUCT?)
L6 0 L3 AND HYDROCARBON? PRODUCT?

=> s l3 and hydrocarbon
310822 HYDROCARBON
310348 HYDROCARBONS
478120 HYDROCARBON
(HYDROCARBON OR HYDROCARBONS)
L7 2 L3 AND HYDROCARBON

=> d l7 ibib ab 1-2

L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:21841 CAPLUS
DOCUMENT NUMBER: 104:21841
TITLE: Purification of carbon monoxide by oxidation and
adsorption
INVENTOR(S): Nishizawa, Yasuo; Takeuchi, Masami
PATENT ASSIGNEE(S): Kansai Coke and Chemicals Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60190495	A2	19850927	JP 1984-45994	19840310
JP 63060080	B4	19881122		

PRIORITY APPLN. INFO.: JP 1984-45994 19840310
AB CO, containing small amts. of O, for production of synthesis gas is purified by
catalytic oxidation of CO over partially reduced 20-40:60-80 (weight%) CuO-ZnO
followed by removal of CO₂, moisture, S compds., or **hydrocarbons**
over active carbon (pore diameter 14-30 Å) or its mixts. with zeolite
and/or Al₂O₃ by pressure-swing adsorption at <230°. Thus, a gas
mixture of 84.5:15.0:0.5 (volume%) CO-N-O was passed over partially reduced
80:20 (weight%) ZnO-CuO at 50,000 h⁻¹, 100°, and 9 kg/cm² to remove O
and then over active carbon (average pore diameter 17 Å) at 500 h⁻¹ and 9
kg/cm² to remove CO₂.

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1960:30989 CAPLUS
DOCUMENT NUMBER: 54:30989
ORIGINAL REFERENCE NO.: 54:6049e-h
TITLE: Gas purification for ammonia synthesis
AUTHOR(S): Guntermann, Wilhelm
SOURCE: GWF, das Gas- und Wasserfach (1959), 100, 1225-9
CODEN: GAWFAN; ISSN: 0367-3839
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB When synthesis gas is made from oils with high S content, considerable
amts. of organic S compds., especially COS, must be removed. Any O must be
removed

from the gas to avoid later S formation, and the gas is then passed over activated Al₂O₃ at 100-20° to convert COS to H₂S in the presence of H₂O. H₂S is then removed by the Alkazid process, which was chosen because the gas is free from HCN and SO₂ and because the process selectively removes H₂S. The gas is then mixed with steam and passed through the CO converter. The amount of steam increases sharply with reduction in final CO content. Heat exchangers are used to minimize the amount of heat required to bring the gas-steam mixture to the conversion temperature and to reduce the amount of makeup steam required. After cooling, any remaining H₂S is removed in a dry purifying tower. CO₂ is then scrubbed from the gas by the Giammarco-Vetrocoke process in which a pressure of only 5 atmospheric is used, but the gas leaving the plant has a CO₂ content of only 0.3%. This plant uses an activated alkali solution, containing As₂O₃ as the activator.

This

solution is regenerated by heating and by passing air through it in a special tower.

=> s purif? synthesis gas (3a) free (2a) oxygen

```

747155 PURIF?
1144312 SYNTHESIS
      3 SYNTHESISES
62627 SYNTHESSES
1179764 SYNTHESIS
      (SYNTHESIS OR SYNTHESISES OR SYNTHESSES)
1382072 GAS
475804 GASES
1552732 GAS
      (GAS OR GASES)
69 PURIF? SYNTHESIS GAS
      (PURIF? (W) SYNTHESIS (W) GAS)
1163441 FREE
576 FREES
1163926 FREE
      (FREE OR FREES)
651306 OXYGEN
6358 OXYGENS
655739 OXYGEN
      (OXYGEN OR OXYGENS)

```

L8 0 PURIF? SYNTHESIS GAS (3A) FREE (2A) OXYGEN

=> s synthesis gas (3a) purif?

```

1144312 SYNTHESIS
      3 SYNTHESISES
62627 SYNTHESSES
1179764 SYNTHESIS
      (SYNTHESIS OR SYNTHESISES OR SYNTHESSES)
1382072 GAS
475804 GASES
1552732 GAS
      (GAS OR GASES)
14907 SYNTHESIS GAS
      (SYNTHESIS (W) GAS)
747155 PURIF?

```

L9 474 SYNTHESIS GAS (3A) PURIF?

=> s l9 and oxygen (3a) remov?

```

651306 OXYGEN
6358 OXYGENS
655739 OXYGEN
      (OXYGEN OR OXYGENS)
1116755 REMOV?
10522 OXYGEN (3A) REMOV?

```

L10 14 L9 AND OXYGEN (3A) REMOV?

=> s 110 and (fischer tropsch or hydrocarbon synthesis)
 21999 FISCHER
 15 FISCHERS
 22011 FISCHER
 (FISCHER OR FISCHERS)
 7127 TROPSCH
 7033 FISCHER TROPSCH
 (FISCHER (W) TROPSCH)
 310822 HYDROCARBON
 310348 HYDROCARBONS
 478120 HYDROCARBON
 (HYDROCARBON OR HYDROCARBONS)
 1144312 SYNTHESIS
 3 SYNTHESISES
 62627 SYNTHESSES
 1179764 SYNTHESIS
 (SYNTHESIS OR SYNTHESISES OR SYNTHESSES)
 1950 HYDROCARBON SYNTHESIS
 (HYDROCARBON (W) SYNTHESIS)
 L11 0 L10 AND (FISCHER TROPSCH OR HYDROCARBON SYNTHESIS)

=> s 110 and liquid hydrocarbon?
 662142 LIQUID
 120553 LIQUIDS
 753384 LIQUID
 (LIQUID OR LIQUIDS)
 915802 LIQ
 87406 LIQS
 949755 LIQ
 (LIQ OR LIQS)
 1321693 LIQUID
 (LIQUID OR LIQ)
 479998 HYDROCARBON?
 10087 LIQUID HYDROCARBON?
 (LIQUID (W) HYDROCARBON?)
 L12 0 L10 AND LIQUID HYDROCARBON?

=> d 110 ibib ab 1-5

L10 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:207895 CAPLUS

DOCUMENT NUMBER: 134:239738

TITLE: Removal of carbon dioxide from gases by using an activated alumina adsorbent

INVENTOR(S): Monereau, Christian

PATENT ASSIGNEE(S): Air Liquide SA pour l'Etude et l'Exploitation des Procédes Georges Claude, Fr.

SOURCE: Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1084743	A1	20010321	EP 2000-401997	20000711
EP 1084743	B1	20021113		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
FR 2798304	A1	20010316	FR 1999-11425	19990913
FR 2798304	B1	20011109		
AT 227601	E	20021115	AT 2000-401997	20000711

US 6379430	B1	20020430	US 2000-629700	20000731
JP 2001104737	A2	20010417	JP 2000-276452	20000912
PRIORITY APPLN. INFO.:			FR 1999-11425	A 19990913

AB A gas containing CO₂ and impurities (e.g., H₂O, NO_x, hydrocarbons, chlorinated hydrocarbons) is purified by adsorption (e.g., thermal-swing adsorption, pressure-swing adsorption) on an adsorbent containing activated Al₂O₃. The adsorbent has a surface area of 200-299 m²/g and contains Al₂O₃ ≥80 (preferably ≥92), SiO₂ 0.0001-3, Fe₂O₃ <1, and ≥1 alkali metal or alkaline earth metal oxide (e.g., Na₂O, K₂O) 0.001-7.25%. The system is suitable for air purification prior to cryogenic distillation in production of N₂, O₂, and/or Ar and for purifn. of synthesis gas prior to cryogenic distillation in production of H₂ and/or CO.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:411738 CAPLUS

DOCUMENT NUMBER: 119:11738

TITLE: Lowering the content of iron and nickel carbonyls in generator gas by increasing the temperature in the reactor for hydrolysis of carbonyl sulfide

AUTHOR(S): Loukota, Jiri; Kubicka, Rudolf

CORPORATE SOURCE: Chem. Zavody, Litvinov, Czech.

SOURCE: Chemicky Prumysl (1993), 43(2), 43-5
CODEN: CHPUA4; ISSN: 0009-2789

DOCUMENT TYPE: Journal

LANGUAGE: Czech

AB Removal of trace amts. of Fe(CO)₅ and Ni(CO)₄ from synthetic gas, produced by partial oxidation of petroleum refining residues and used mainly for H manufacture, was investigated. After desulfurization, the synthesis gas is saturated with steam and passed through a reactor filled with a Co-Mo/Al₂O₃ catalyst and a reactor filled with AC₂O₃ to remove residual O, hydrolyze COS, and decompose Fe(CO)₅ and Ni(CO)₄. When temperature in the hydrolysis step was increased from 150 to 200°, removal of Fe(CO)₅ was increased by 85% but removal of Ni(CO)₄ was increased only by 25%. However, amount of deposits in the downstream high-temperature conversion equipment was decreased by .apprx.70%.

L10 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:178249 CAPLUS

DOCUMENT NUMBER: 118:178249

TITLE: Operating experience of gas purification system of Heavy Water Plant Talcher

AUTHOR(S): Bhattacharya, R.; Mohanty, P. R.; Pandey, B. L.

CORPORATE SOURCE: Heavy Water Plant Talcher, India

SOURCE: Natl. Symp. Comm. Oper. Exper. Heavy Water Plants Assoc. Chem. Ind. (1992), paper 1.11, 11 pp.. Bhabha At. Res. Cent.: Bombay, India.
CODEN: 58WEA5

DOCUMENT TYPE: Conference

LANGUAGE: English

AB The operating experience at Heavy Water Plant Talcher shows that the purification system was performed satisfactorily even with levels of impurities as much as 15 to 20 ppm of oxygen and carbon monoxide. The system could, however, not be tested at designed gas throughput and on a sustained basis. However, increase in gas throughput up to the design value is not expected to pose any problem on the performance of the purification system. From the experience gained at Heavy Water Plant Talcher and limitations identified, a reliable system can be designed which will ensure trouble free operation of the down stream sections of all Heavy Water Plants.

L10 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1986:21841 CAPLUS
 DOCUMENT NUMBER: 104:21841
 TITLE: Purification of carbon monoxide by oxidation and adsorption
 INVENTOR(S): Nishizawa, Yasuo; Takeuchi, Masami
 PATENT ASSIGNEE(S): Kansai Coke and Chemicals Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60190495	A2	19850927	JP 1984-45994	19840310
JP 63060080	B4	19881122		

PRIORITY APPLN. INFO.: JP 1984-45994 19840310

AB CO, containing small amts. of O, for production of **synthesis gas** is **purified** by catalytic oxidation of CO over partially reduced 20-40:60-80 (weight%) CuO-ZnO followed by removal of CO₂, moisture, S compds., or hydrocarbons over active carbon (pore diameter 14-30 Å) or its mixts. with zeolite and/or Al₂O₃ by pressure-swing adsorption at <230°. Thus, a gas mixture of 84.5:15.0:0.5 (volume%) CO-N-O was passed over partially reduced 80:20 (weight%) ZnO-CuO at 50,000 h⁻¹, 100°, and 9 kg/cm² to remove O and then over active carbon (average pore diameter 17 Å) at 500 h⁻¹ and 9 kg/cm² to remove CO₂.

L10 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1985:563331 CAPLUS
 DOCUMENT NUMBER: 103:163331
 TITLE: Method and apparatus for preventing oxygen breakthrough in coal gasification
 INVENTOR(S): Richter, Gerhard; Groeschel, Lutz; Klose, Erhard; Burkhardt, Horst; Heynisch, Joachim; Krieg, Peter; Neumann, Berthold; Schmidt, Andrea; Slabik, Johannes; Wuntschoff, Todor
 PATENT ASSIGNEE(S): VEB Gaskombinat Schwarze Pumpe, Ger. Dem. Rep.
 SOURCE: Ger. (East), 9 pp.
 CODEN: GEXXA8
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 219791	A1	19850313	DD 1983-257507	19831205

PRIORITY APPLN. INFO.: DD 1983-257507 19831205

AB Raw synthesis gas from fixed-bed coal gasification (especially pressurized gasification of brown coal) is passed through a fixed bed or fluidized bed consisting of a fuel (e.g., coal) to remove residual O (remaining from the gasification agent) to prevent explosions. At 400-500°, O is completely converted; the gas can then be subjected to conventional purification

=> d l10 ibib ab 6-14

L10 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1980:481017 CAPLUS
 DOCUMENT NUMBER: 93:81017
 TITLE: Some preparation problems, activity, and thermal stability of a copper-containing catalyst used for the

removal of oxygen from synthesis gas
AUTHOR(S): Atroshchenko, V. I.; Slabun, I. A.; Gavrya, N. A.;
Karavaev, M. M.; Lender, A. A.
CORPORATE SOURCE: Khar'k. Politekh. Inst., Kharkov, USSR
SOURCE: Tezisy Dokl. - Ukr. Resp. Konf. Fiz. Khim., 12th (1977
) , 103-4. Editor(s): Yatsimirskii, K. B. Izd. Naukova Dumka: Kiev, USSR.
CODEN: 42WKA4

DOCUMENT TYPE: Conference

LANGUAGE: Russian

AB A Cu/Al₂O₃ catalyst was developed for the removal of O from a H₂ + CO mixture for the synthesis of MeOH. The conditions were optimized for the impregnation of the Al₂O₃ carrier with Cu in a solution. The catalyst was tested at 50 atmospheric and 210-230° for the **purifn.** of a **synthesis gas** with an initial content of 0.3-0.33% O₂. The Cu/Al₂O₃ catalyst showed higher activity and thermal stability than the previously used com. catalyst NTK-2.

L10 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1980:131480 CAPLUS

DOCUMENT NUMBER: 92:131480

TITLE: Production of ammonia **synthesis gas**
by **purification** and shift conversion of gas
produced from coal

AUTHOR(S): Partridge, Lincoln J.

CORPORATE SOURCE: Modderfontein Fact., AECI Ltd., Johannesburg, 1645, S.
Afr.

SOURCE: Chemical Engineer (Rugby, United Kingdom) (1980), 353,
88-90, 94

CODEN: CMERA9; ISSN: 0302-0797

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In the use of coal for manufacturing gases for NH₃ synthesis, the deposition of S and S compds. in gas compressors and the Rectisol unit (mainly elemental S, Fe sulfide, and Roussin's salt) was decreased by decreasing the water rate to the HCN removal column so that some HCN could enter the H₂S absorber to form NH₄SCN which is dissolved in the MeOH. In the shift conversion unit the corrosion of C steel tubes in the recycle water heater and distribution trays in the saturator and desaturator was decreased by adding NH₃ and limiting the maximum allowable liquid velocities. The disintegration of the shift conversion catalyst pellets, caused by contamination with SiO₂, was prevented by replacing ceramic saddles used in packing the saturator and desaturator with stainless steel mini rings. The disintegration caused by thermal cycling during shutdown and startup was decreased by improving temperature control. Absorption of NO by N in the liquid-N wash cycle was decreased by reducing the NO with NH₃ and by passing the raw gas from coal gasification through a Co molybdate catalyst to remove both O and NO. When the O was removed, S deposition in the Rectisol plant stopped.

L10 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1979:5837 CAPLUS

DOCUMENT NUMBER: 90:5837

TITLE: Catalytic removal of unsaturated compounds and oxygen
from synthesis gas for acetylene production.
Communication 2

AUTHOR(S): Furen, E. L.; Fingerova, M. S.

CORPORATE SOURCE: Gos. Nauchno-Issled. Proektn. Inst. Azotn. Prom. Prod.
Org. Sint., Severodonetsk, USSR

SOURCE: Kataliz i Katalizatory (1978), 16, 103-6

CODEN: KAKAAQ; ISSN: 0453-3585

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB C₂H₂ was removed from synthesis gas for C₂H₂ production by hydrogenation over 0.1% Pd/Al₂O₃ at 80-90°, 7 atmospheric and space velocity 10,000 h⁻¹.

Removal of C₂H₄ and O₂ required a temperature at 230-40° under these conditions.

L10 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1979:5836 CAPLUS

DOCUMENT NUMBER: 90:5836

TITLE: Catalytic removal of unsaturated compounds and oxygen from synthesis gas for acetylene production. Communication 1.

AUTHOR(S): Furen, E. L.; Fingerova, M. S.

CORPORATE SOURCE: Gos. Nauchno-Issled. Proektn. Inst. Azotn. Prom. Prod. Org. Sint., Severodonetsk, USSR

SOURCE: Kataliz i Katalizatory (1978), 16, 99-103

CODEN: KAKAAQ; ISSN: 0453-3585

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB C₂H₂, C₂H₄ and O₂ were removed from synthesis gas for C₂H₂ production by hydrogenation at 100-300°, 1 atmospheric and space velocity 5000-40,000 h₁ over 0.1 or 2% Pd/Al₂O₃.

L10 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1969:490695 CAPLUS

DOCUMENT NUMBER: 71:90695

TITLE: Conversion of carbon monoxide and simultaneous removal of nitrogen oxide and oxygen from the synthesized gas with the aid of low temperature catalysts

AUTHOR(S): Shishkov, Dimiter S.; Koicharova, M.; Ivanov, Diko;

Galunski, Z.; Dimov, G.; Gruev, K.; Grueva, D.

CORPORATE SOURCE: Chem.-Technol. Inst., Sofia, Bulg.

SOURCE: Allgemeine und Praktische Chemie (1969), 20(3), 68-70

CODEN: APKCAR; ISSN: 0002-595X

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The composition of synthesis (for NH₃) gas before conversion was: 88 H, 3.5 N, 5.4 CO, 2.5 CH₄, 0.6% CO₂, up to 5 mg./m.³ H₂S, 0.5 ppm. N₂O, and 1000 ppm. O. The low-temperature catalysts had Zn, Cu, and Cr as fundamental ingredients. Their sp. surface was from 30 to 60 m.²/g., and the pore radius was 150-300 Å. The catalysts were protected against S compds. by a coating of desulfurated ZnO. Their reduction was carried out below 250° with a water free gaseous mixture. The conversion showed equal concns. of CO with different low-temperature catalysts. The rate of flow at

low

temps., however, had a considerable influence on the amount of residual CO. The reduction power for NO and N was also good, and it was possible to have a single stage conversion. Solid or liquid fuels were usable, and the remaining CO (up to 0.3%) could be removed with liquid N, of which less was now consumed. The conversion caused a 5% increase of NH₃ production.

L10 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1968:444972 CAPLUS

DOCUMENT NUMBER: 69:44972

TITLE: Removing oxygen and carbonyl sulfide from gases

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij N. V.

SOURCE: Neth. Appl., 10 pp.

CODEN: NAXXAN

DOCUMENT TYPE: Patent

LANGUAGE: Dutch

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6615007		19680425	NL	19661024

FR 1541573
GB 1145032
US 3554689 19710000 US

AB Synthesis gas containing O and COS is treated at 70-120° successively with a hydrogenation catalyst composed of sulfided metals from Group VI and (or) VIII, such as sulfided CoMoO₄ on Al₂O₃, which convert the O to H₂O, and then with an Al₂O₃ catalyst (sp. surface >50 m.²/g.) in pH 9 alkali phosphate solution to convert COS to H₂S and CO. By removing the O before the COS, the reaction can be performed at a temperature <150-350°, without deposition of S on the catalyst.

L10 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1963:8070 CAPLUS
DOCUMENT NUMBER: 58:8070
ORIGINAL REFERENCE NO.: 58:1276b-c
TITLE: Removal of oxygen, carbon monoxide, carbon dioxide and water from synthesis gas
INVENTOR(S): Delassus, Marcel; Lefrancois, Bernard; Vaniscotte, Christian
PATENT ASSIGNEE(S): Houilleres du Bassin-du-Nord et du Pas-de-Calais
SOURCE: 4 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3055732		19620925	US	
GB 917039			GB	
PRIORITY APPLN. INFO.:			FR	19590718

AB Synthesis gas mixts. are purified of O, CO, CO₂, and H₂O by treating the mixture with a solution of at least 0.2% by weight alkali metal amide in liquid NH₃ at -70 to + 100° and 50-500 kg./sq. cm. Thus, a N + 3H₂ gas mixture intended for the synthesis of NH₃ contains 17 p.p.m. O₂, 12 p.p.m. CO and CO₂, and 5 mg./cu. m. H₂O. This gas, compressed to 500 kg./cu. m., is introduced at -20° at the base of a tubular reactor and dispersed by a fritted iron plate. The reactor contains 600 cc. 1% by weight KNH₂ in NH₃. After the passage of 50 cu.m. of gas at a rate of 25 cu. m./hr., the exit gas contains 1 p.p.m. O₂, 1 p.p.m. CO + CO₂, and 0.5 mg./cu. m. H₂O.

L10 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1956:75592 CAPLUS
DOCUMENT NUMBER: 50:75592
ORIGINAL REFERENCE NO.: 50:14207a-b
TITLE: Purification of synthesis gas. Removal of dust, carbon dioxide, and sulfur compounds
AUTHOR(S): Wainwright, H. W.; Kane, L. J.; Wilson, M. W.; Shale, C. C.; Ratway, J.
CORPORATE SOURCE: U.S. Bur. of Mines, Morgantown, West Va.
SOURCE: Journal of Industrial and Engineering Chemistry (Washington, D. C.) (1956), 48, 1123-33
CODEN: JIECAD; ISSN: 0095-9014
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB H₂S, O, dust, CO₂, and COS are the impurities present in raw synthesis gas produced at Morgantown, West Va., by reaction of coal with O and steam. Exptl. data have been given on the quantities of the impurities present, analytical methods suitable for determining low concns. of these impurities, and processes for removing them from the raw gas. The selection of any one of several purification schemes described will depend on the composition of the gas, the gas pressure, comparative costs of the various steps, and other

fractors.

L10 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1954:62163 CAPLUS

DOCUMENT NUMBER: 48:62163

ORIGINAL REFERENCE NO.: 48:11012g-h

TITLE: High-pressure purification and regeneration in ammonia synthesis

AUTHOR(S): Jagannathan, R.

SOURCE: Trans. Indian Inst. Chem. Engrs. (1953), Volume Date 1952-1953, 5, 109-16

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB cf. preceding abstract The removal of impurities, e.g. CO, CO₂, and O, from the gas stream entering the reactor is accomplished by the use of cold ammoniacal Cu(I) formate solution Regeneration of spent solution is brought about by heating to drive off CO and CO₂. Flow diagrams are given for both purification and regeneration stages.

WEST Search History

Hide Items

Restore

Clear

Cancel

DATE: Monday, October 11, 2004

Hide?	Set Name	Query	Hit Count
	<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L8	l6 not l7	33
<input type="checkbox"/>	L7	l6 and liquid hydrocarbon\$1	21
<input type="checkbox"/>	L6	remov\$3 near4 oxygen with synthesis gas	54
<input type="checkbox"/>	L5	remov\$3 oxygen near3 synthesis gas	1
<input type="checkbox"/>	L4	second syngas same less oxygen	3
	<i>DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L3	second syngas same less oxygen	2
	<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L2	second synthesis gas same less oxygen	0
<input type="checkbox"/>	L1	second synthesis gas with less oxygen	0

END OF SEARCH HISTORY

WEST Search History

DATE: Monday, October 11, 2004

Hide?	Set Name	Query	Hit Count
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L11	L10 and liquid hydrocarbon\$1	20
<input type="checkbox"/>	L10	L9 and fischer tropsch	37
<input type="checkbox"/>	L9	synthesis gas with free near2 oxygen	298
<input type="checkbox"/>	L8	l6 not l7	33
<input type="checkbox"/>	L7	l6 and liquid hydrocarbon\$1	21
<input type="checkbox"/>	L6	remov\$3 near4 oxygen with synthesis gas	54
<input type="checkbox"/>	L5	remov\$3 oxygen near3 synthesis gas	1
<input type="checkbox"/>	L4	second syngas same less oxygen	3
<i>DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L3	second syngas same less oxygen	2
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L2	second synthesis gas same less oxygen	0
<input type="checkbox"/>	L1	second synthesis gas with less oxygen	0

END OF SEARCH HISTORY

WEST Search History

DATE: Monday, October 11, 2004

Hide?	Set Name	Query	Hit Count
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L13	L12 and (Fischer near1 tropsch or hydrocarbon synthesis or liquid hydrocarbons)	10
<input type="checkbox"/>	L12	remov\$3 near2 oxygen near4 synthesis gas	16
<input type="checkbox"/>	L11	L10 and liquid hydrocarbon\$1	20
<input type="checkbox"/>	L10	L9 and fischer tropsch	37
<input type="checkbox"/>	L9	synthesis gas with free near2 oxygen	298
<input type="checkbox"/>	L8	l6 not l7	33
<input type="checkbox"/>	L7	l6 and liquid hydrocarbon\$1	21
<input type="checkbox"/>	L6	remov\$3 near4 oxygen with synthesis gas	54
<input type="checkbox"/>	L5	remov\$3 oxygen near3 synthesis gas	1
<input type="checkbox"/>	L4	second syngas same less oxygen	3
<i>DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L3	second syngas same less oxygen	2
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L2	second synthesis gas same less oxygen	0
<input type="checkbox"/>	L1	second synthesis gas with less oxygen	0

END OF SEARCH HISTORY

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1202jxp

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 Jul 12 BEILSTEIN enhanced with new display and select options,
resulting in a closer connection to BABS
NEWS 4 AUG 02 IFIPAT/IFIUDB/IFICDB reloaded with new search and display
fields
NEWS 5 AUG 02 CAplus and CA patent records enhanced with European and Japan
Patent Office Classifications
NEWS 6 AUG 02 The Analysis Edition of STN Express with Discover!
(Version 7.01 for Windows) now available
NEWS 7 AUG 27 BIOCOMMERCE: Changes and enhancements to content coverage
NEWS 8 AUG 27 BIOTECHABS/BIOTECHDS: Two new display fields added for legal
status data from INPADOC
NEWS 9 SEP 01 INPADOC: New family current-awareness alert (SDI) available
NEWS 10 SEP 01 New pricing for the Save Answers for SciFinder Wizard within
STN Express with Discover!
NEWS 11 SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
NEWS 12 SEP 14 STN Patent Forum to be held October 13, 2004, in Iselin, NJ
NEWS 13 SEP 27 STANDARDS will no longer be available on STN
NEWS 14 SEP 27 SWETSCAN will no longer be available on STN

NEWS EXPRESS JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 15:38:58 ON 11 OCT 2004

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'CAPLUS' ENTERED AT 15:39:06 ON 11 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 11 Oct 2004 VOL 141 ISS 16
FILE LAST UPDATED: 10 Oct 2004 (20041010/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s remov? (2a) oxygen (3a) synthesis gas

1116755 REMOV?
651306 OXYGEN
6358 OXYGENS
655739 OXYGEN
(OXYGEN OR OXYGENS)
1144312 SYNTHESIS
3 SYNTHESISES
62627 SYNTHESSES
1179764 SYNTHESIS
(SYNTHESIS OR SYNTHESISES OR SYNTHESSES)
1382072 GAS
475804 GASES
1552732 GAS
(GAS OR GASES)
14907 SYNTHESIS GAS
(SYNTHESIS (W) GAS)

L1 17 REMOV? (2A) OXYGEN (3A) SYNTHESIS GAS

=> s l1 and (hydrocarbon synthesis or produc? (1a) hydrocarbon or fischer tropsch or liquid hydrocarbon?)

310822 HYDROCARBON
310348 HYDROCARBONS
478120 HYDROCARBON
(HYDROCARBON OR HYDROCARBONS)
1144312 SYNTHESIS
3 SYNTHESISES
62627 SYNTHESSES
1179764 SYNTHESIS
(SYNTHESIS OR SYNTHESISES OR SYNTHESSES)
1950 HYDROCARBON SYNTHESIS
(HYDROCARBON (W) SYNTHESIS)
3911872 PRODUC?
833264 PRODN
528 PRODNS
833444 PRODN
(PRODN OR PRODNS)
4319271 PRODUC?
(PRODUC? OR PRODN)
310822 HYDROCARBON
310348 HYDROCARBONS

478120 HYDROCARBON
 (HYDROCARBON OR HYDROCARBONS)
 10758 PRODUC? (1A) HYDROCARBON
 21999 FISCHER
 15 FISCHERS
 22011 FISCHER
 (FISCHER OR FISCHERS)
 7127 TROPSCH
 7033 FISCHER TROPSCH
 (FISCHER (W) TROPSCH)
 662142 LIQUID
 120553 LIQUIDS
 753384 LIQUID
 (LIQUID OR LIQUIDS)
 915802 LIQ
 87406 LIQS
 949755 LIQ
 (LIQ OR LIQS)
 1321693 LIQUID
 (LIQUID OR LIQ)
 479998 HYDROCARBON?
 10087 LIQUID HYDROCARBON?
 (LIQUID (W) HYDROCARBON?)
 L2 1 L1 AND (HYDROCARBON SYNTHESIS OR PRODUC? (1A) HYDROCARBON OR
 FISCHER TROPSCH OR LIQUID HYDROCARBON?)

=> d l2 ibib ab

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2003:633289 CAPLUS
 DOCUMENT NUMBER: 139:152079
 TITLE: Selective removal of oxygen from syngas in production
 of **liquid hydrocarbons**
 INVENTOR(S): Wang, Daxiang; Wright, Harold A.; Ortego, Beatrice C.;
 Trinh, Sinh H.; Espinoza, Rafael L.
 PATENT ASSIGNEE(S): Conoco Inc., USA; Conocophillips Co.
 SOURCE: U.S. Pat. Appl. Publ., 27 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003153632	A1	20030814	US 2002-219108	20020815
US 6747066	B2	20040608		
US 2004198845	A1	20041007	US 2004-822528	20040412
PRIORITY APPLN. INFO.:			US 2002-353774P	P 20020131
			US 2002-353822P	P 20020131
			US 2002-219108	A3 20020815

AB The present invention is an improvement in the preparation of **liq. hydrocarbons** from natural gas/methane, O and/or steam. In particular, the present invention relates to processes for the production of synthesis gas, reducing the O concentration from the synthesis gas, and the production of **liq. hydrocarbons** using the O reduced synthesis gas as a feedstock. More particularly, the present invention described herein identifies catalyst compns., apparatus and methods of using such catalysts and apparatus for preparing **liq. hydrocarbons** via O reduced synthesis gas all in accordance with the present invention.
 REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT.

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal202jxp

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 Jul 12 BEILSTEIN enhanced with new display and select options,
resulting in a closer connection to BABS
NEWS 4 AUG 02 IFIPAT/IFIUDB/IFICDB reloaded with new search and display
fields
NEWS 5 AUG 02 Caplus and CA patent records enhanced with European and Japan
Patent Office Classifications
NEWS 6 AUG 02 The Analysis Edition of STN Express with Discover!
(Version 7.01 for Windows) now available
NEWS 7 AUG 27 BIOCOMMERCE: Changes and enhancements to content coverage
NEWS 8 AUG 27 BIOTECHABS/BIOTECHDS: Two new display fields added for legal
status data from INPADOC
NEWS 9 SEP 01 INPADOC: New family current-awareness alert (SDI) available
NEWS 10 SEP 01 New pricing for the Save Answers for SciFinder Wizard within
STN Express with Discover!
NEWS 11 SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
NEWS 12 SEP 14 STN Patent Forum to be held October 13, 2004, in Iselin, NJ
NEWS 13 SEP 27 STANDARDS will no longer be available on STN
NEWS 14 SEP 27 SWETSCAN will no longer be available on STN

NEWS EXPRESS JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:33:10 ON 13 OCT 2004

=> file caplus
COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FILE 'CAPLUS' ENTERED AT 13:33:19 ON 13 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 13 Oct 2004 VOL 141 ISS 16
FILE LAST UPDATED: 12 Oct 2004 (20041012/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s separat? oxygen (4a) (syngas or synthesis gas)
310801 SEPARAT?
259470 SEP
12504 SEPS
270806 SEP
(SEP OR SEPS)
431317 SEPD
3 SEPDS
431320 SEPD
(SEPD OR SEPDS)
85407 SEPG
1 SEPGS
85408 SEPG
(SEPG OR SEPGS)
531929 SEPN
34363 SEPNS
549268 SEPN
(SEPN OR SEPNS)
1295005 SEPARAT?
(SEPARAT? OR SEP OR SEPD OR SEPG OR SEPN)
651629 OXYGEN
6364 OXYGENS
656066 OXYGEN
(OXYGEN OR OXYGENS)
480 SEPARAT? OXYGEN
(SEPARAT?(W)OXYGEN)
3281 SYNGAS
13 SYNGASES
3286 SYNGAS
(SYNGAS OR SYNGASES)
1144729 SYNTHESIS
3 SYNTHESISES
62634 SYNTHESES
1180182 SYNTHESIS
(SYNTHESIS OR SYNTHESISES OR SYNTHESES)
1382415 GAS
475959 GASES
1553122 GAS
(GAS OR GASES)
14913 SYNTHESIS GAS
(SYNTHESIS(W)GAS)

L1 1 SEPARAT? OXYGEN (4A) (SYNGAS OR SYNTHESIS GAS)

=> d l1

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1993:411909 CAPLUS
DN 119:11909
TI Manufacture of synthesis gas
IN Uchijima, Toshio; Kunimori, Kimio; Nakamura, Junji
PA Mitsubishi Kasei Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04367501	A2	19921218	JP 1991-168806	19910613
PRAI	JP 1991-168806		19910613		

=> d l1 ibib ab

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:411909 CAPLUS
DOCUMENT NUMBER: 119:11909
TITLE: Manufacture of synthesis gas
INVENTOR(S): Uchijima, Toshio; Kunimori, Kimio; Nakamura, Junji
PATENT ASSIGNEE(S): Mitsubishi Kasei Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 04367501	A2	19921218	JP 1991-168806	19910613
PRIORITY APPLN. INFO.:				JP 1991-168806	19910613

AB A method for manufacture of synthesis gas comprises contacting an O-containing gas (e.g., 10% O₂/90% He) with a solid O-activating agent (e.g., 5 weight% Rh/SiO₂) and contacting the agent with a methane-containing gas (e.g., 2% CH₄/98% He) to obtain a synthesis gas by partial oxidation. The contacting steps can be repeatedly applied. The method improves CH₄ conversion with high CO selectivity at low-temperature reaction conditions.

=> d his

(FILE 'HOME' ENTERED AT 13:33:10 ON 13 OCT 2004)

FILE 'CAPLUS' ENTERED AT 13:33:19 ON 13 OCT 2004

L1 1 S SEPARAT? OXYGEN (4A) (SYNGAS OR SYNTHESIS GAS)

=> s remov? oxygen (3a) (syngas or synthesis gas)

1117013 REMOV?

651629 OXYGEN

6364 OXYGENS

656066 OXYGEN

(OXYGEN OR OXYGENS)

624 REMOV? OXYGEN

(REMOV? (W) OXYGEN)

```

3281 SYNGAS
13 SYNGASES
3286 SYNGAS
      (SYNGAS OR SYNGASES)
1144729 SYNTHESIS
3 SYNTHESISES
62634 SYNTHESES
1180182 SYNTHESIS
      (SYNTHESIS OR SYNTHESISES OR SYNTHESES)
1382415 GAS
475959 GASES
1553122 GAS
      (GAS OR GASES)
14913 SYNTHESIS GAS
      (SYNTHESIS(W)GAS)
L2      1 REMOV? OXYGEN (3A) (SYNGAS OR SYNTHESIS GAS)

=> s purif? (2a) synthesis gas
747385 PURIF?
1144729 SYNTHESIS
3 SYNTHESISES
62634 SYNTHESES
1180182 SYNTHESIS
      (SYNTHESIS OR SYNTHESISES OR SYNTHESES)
1382415 GAS
475959 GASES
1553122 GAS
      (GAS OR GASES)
14913 SYNTHESIS GAS
      (SYNTHESIS(W)GAS)
L3      447 PURIF? (2A) SYNTHESIS GAS

=> s l3 and partial oxid?
350805 PARTIAL
928 PARTIALS
351370 PARTIAL
      (PARTIAL OR PARTIALS)
2652455 OXID?
9765 PARTIAL OXID?
      (PARTIAL(W)OXID?)
L4      29 L3 AND PARTIAL OXID?

=> s l4 and (remov? (1a) oxygen or separat? (1a) oxygen)
1117013 REMOV?
651629 OXYGEN
6364 OXYGENS
656066 OXYGEN
      (OXYGEN OR OXYGENS)
7956 REMOV? (1A) OXYGEN
310801 SEPARAT?
259470 SEP
12504 SEPS
270806 SEP
      (SEP OR SEPS)
431317 SEPD
3 SEPDs
431320 SEPD
      (SEPD OR SEPDs)
85407 SEPG
1 SEPGS
85408 SEPG
      (SEPG OR SEPGS)
531929 SEPN
34363 SEPNs

```

549268 SEPN
(SEPN OR SEPNS)
1295005 SEPARAT?
(SEPARAT? OR SEP OR SEPD OR SEPG OR SEPN)
651629 OXYGEN
6364 OXYGENS
656066 OXYGEN
(OXYGEN OR OXYGENS)
3962 SEPARAT? (1A) OXYGEN

L5 1 L4 AND (REMOV? (1A) OXYGEN OR SEPARAT? (1A) OXYGEN)

=> d 15

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1993:411738 CAPLUS
DN 119:11738
TI Lowering the content of iron and nickel carbonyls in generator gas by
increasing the temperature in the reactor for hydrolysis of carbonyl
sulfide
AU Loukota, Jiri; Kubicka, Rudolf
CS Chem. Zavody, Litvinov, Czech.
SO Chemicky Prumysl (1993), 43(2), 43-5
CODEN: CHPUA4; ISSN: 0009-2789
DT Journal
LA Czech

=> d 15 ibib ab

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:411738 CAPLUS
DOCUMENT NUMBER: 119:11738
TITLE: Lowering the content of iron and nickel carbonyls in
generator gas by increasing the temperature in the
reactor for hydrolysis of carbonyl sulfide
AUTHOR(S): Loukota, Jiri; Kubicka, Rudolf
CORPORATE SOURCE: Chem. Zavody, Litvinov, Czech.
SOURCE: Chemicky Prumysl (1993), 43(2), 43-5
CODEN: CHPUA4; ISSN: 0009-2789
DOCUMENT TYPE: Journal
LANGUAGE: Czech
AB Removal of trace amts. of Fe(CO)5 and Ni(CO)4 from synthetic gas, produced
by **partial oxidn.** of petroleum refining residues and
used mainly for H manufacture, was investigated. After desulfurization, the
synthesis gas is saturated with steam and passed through a reactor filled with
a Co-Mo/Al2O3 catalyst and a reactor filled with AC2O3 to remove residual
O, hydrolyze COS, and decompose Fe(CO)5 and Ni(CO)4. When temperature in the
hydrolysis step was increased from 150 to 200°, removal of Fe(CO)5
was increased by 85% but removal of Ni(CO)4 was increased only by 25%.
However, amount of deposits in the downstream high-temperature conversion
equipment was decreased by .apprx.70%.

=> d his

(FILE 'HOME' ENTERED AT 13:33:10 ON 13 OCT 2004)

FILE 'CAPLUS' ENTERED AT 13:33:19 ON 13 OCT 2004

L1 1 S SEPARAT? OXYGEN (4A) (SYNGAS OR SYNTHESIS GAS)
L2 1 S REMOV? OXYGEN (3A) (SYNGAS OR SYNTHESIS GAS)
L3 447 S PURIF? (2A) SYNTHESIS GAS
L4 29 S L3 AND PARTIAL OXID?
L5 1 S L4 AND (REMOV? (1A) OXYGEN OR SEPARAT? (1A) OXYGEN)

=> s purif? (1a) (syngas or synthesis gas)

747385 PURIF?
3281 SYNGAS
13 SYNGASES
3286 SYNGAS
(SYNGAS OR SYNGASES)
1144729 SYNTHESIS
3 SYNTHESISES
62634 SYNTHESSES
1180182 SYNTHESIS
(SYNTHESIS OR SYNTHESISES OR SYNTHESSES)
1382415 GAS
475959 GASES
1553122 GAS
(GAS OR GASES)
14913 SYNTHESIS GAS
(SYNTHESIS(W)GAS)

L6 426 PURIF? (1A) (SYNGAS OR SYNTHESIS GAS)

=> s l6 and remov? (oxygen or separat? oxygen)

MISSING OPERATOR 'REMOV? (OXYGEN'

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> s l6 and (remov? oxygen or separat? oxygen)

1117013 REMOV?
651629 OXYGEN
6364 OXYGENS
656066 OXYGEN
(OXYGEN OR OXYGENS)
624 REMOV? OXYGEN
(REMOV? (W) OXYGEN)
310801 SEPARAT?
259470 SEP
12504 SEPS
270806 SEP
(SEP OR SEPS)
431317 SEPD
3 SEPDS
431320 SEPD
(SEPD OR SEPDS)
85407 SEPG
1 SEPGS
85408 SEPG
(SEPG OR SEPGS)
531929 SEPN
34363 SEPNS
549268 SEPN
(SEPN OR SEPNS)
1295005 SEPARAT?
(SEPARAT? OR SEP OR SEPD OR SEPG OR SEPN)
651629 OXYGEN
6364 OXYGENS
656066 OXYGEN
(OXYGEN OR OXYGENS)
480 SEPARAT? OXYGEN
(SEPARAT? (W) OXYGEN)

L7 1 L6 AND (REMOV? OXYGEN OR SEPARAT? OXYGEN)

=> d l7

L7 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1968:444972 CAPLUS
DN 69:44972

TI Removing oxygen and carbonyl sulfide from gases
PA Shell Internationale Research Maatschappij N. V.
SO Neth. Appl., 10 pp.
CODEN: NAXXAN

DT Patent

LA Dutch

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	NL 6615007		19680425	NL	19661024
	FR 1541573			FR	
	GB 1145032			GB	
	US 3554689		19710000	US	